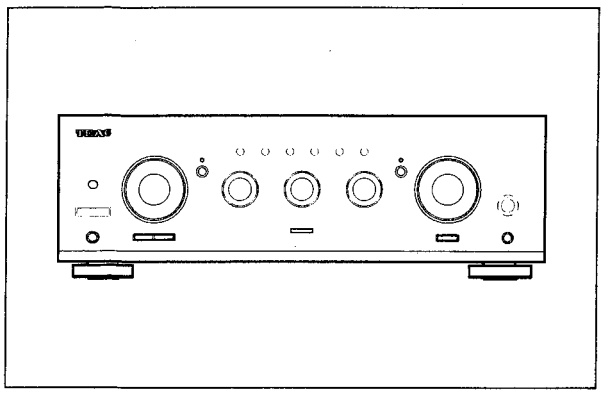


TEAC

TEAC -00420

SERVICE MANUAL

A-R600

Integrated Stereo Amplifier

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sigh are critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US] : U.S.A. [C] : CANADA
  [E] : EUROPE [UK] : U.K. [GE] : GENERAL EXPORT

9A074200

420

CONTENTS

SPECIFICATION 3
ADJUSTMENTS POINT 4
WIRING DIAGRAM 5
BLOCK DIAGRAM 7
SCHEMATIC DIAGRAM 9
PRINTED CIRCUIT BOARDS 13
EXPLODED VIEW 17
ELECTRICAL PARTS LIST 20

SPECIFICATIONS

Power Output (0.5% THD, 1 kHz, 4Ω):
120 W + 120 W

Total Harmonic Distortion :
0.02% (1kHz, 8Ω, 60 W)

S/N (Input shorted) :
PHONO : 65 dB (IHF-A)
CD, TUNER, AUX, TAPE, VCR : 90 dB (IHF-A)

Input Sensitivity/ Impedance :
PHONO : 2.8mV/47 kΩ
AV 1, AV 2, CD, TAPE, TUNER : 180mV/47 kΩ

Tone Control :
BASS : ±10 dB (100 Hz)
TREBLE : ±10 dB (10 kHz)

Channel Separation (Input shorted) :
65 dB (1 kHz)

Frequency Response : 5 Hz - 80 kHz
(SOURCE DIRECT, 1W)

■ General

Power Consumption : 280 W
(at 1/8 output, 6% Over Voltage)

Power Supply : AC 230 V , 50 Hz [E/B/S]
AC 230 V/120 V , 50-60 Hz [U]
AC 120 V , 60 Hz [U.S.A/CANADA]

Dimensions (W x H x D) : 430 x 142 x 355 mm

Weight (net) : 9.7 kg (net)

■ Standard Accessories :

Remote Control Unit x 1
Operator's Manual x 1

- Improvements may result in specifications and features changing without notice.
- Illustrations may differ slightly from production models.

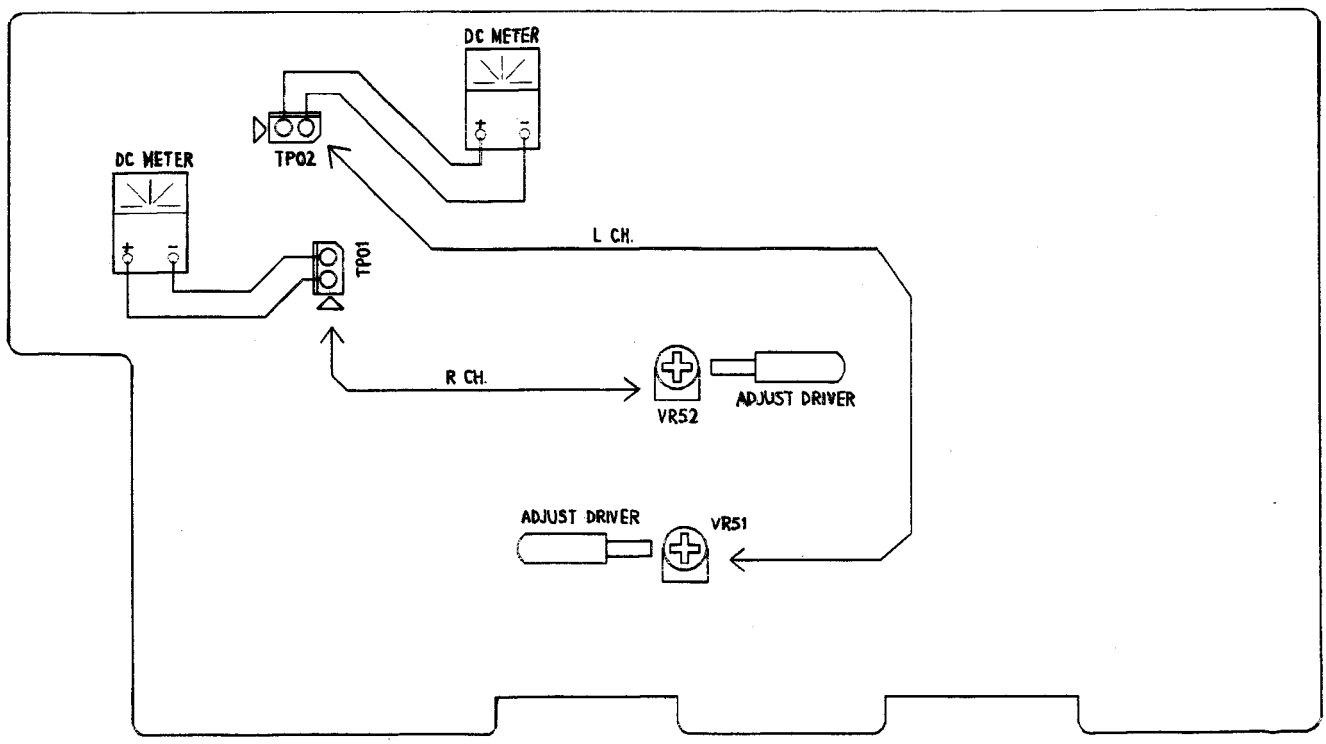
ADJUSTMENT POINT

IDLING CURRENT ADJUSTMENT

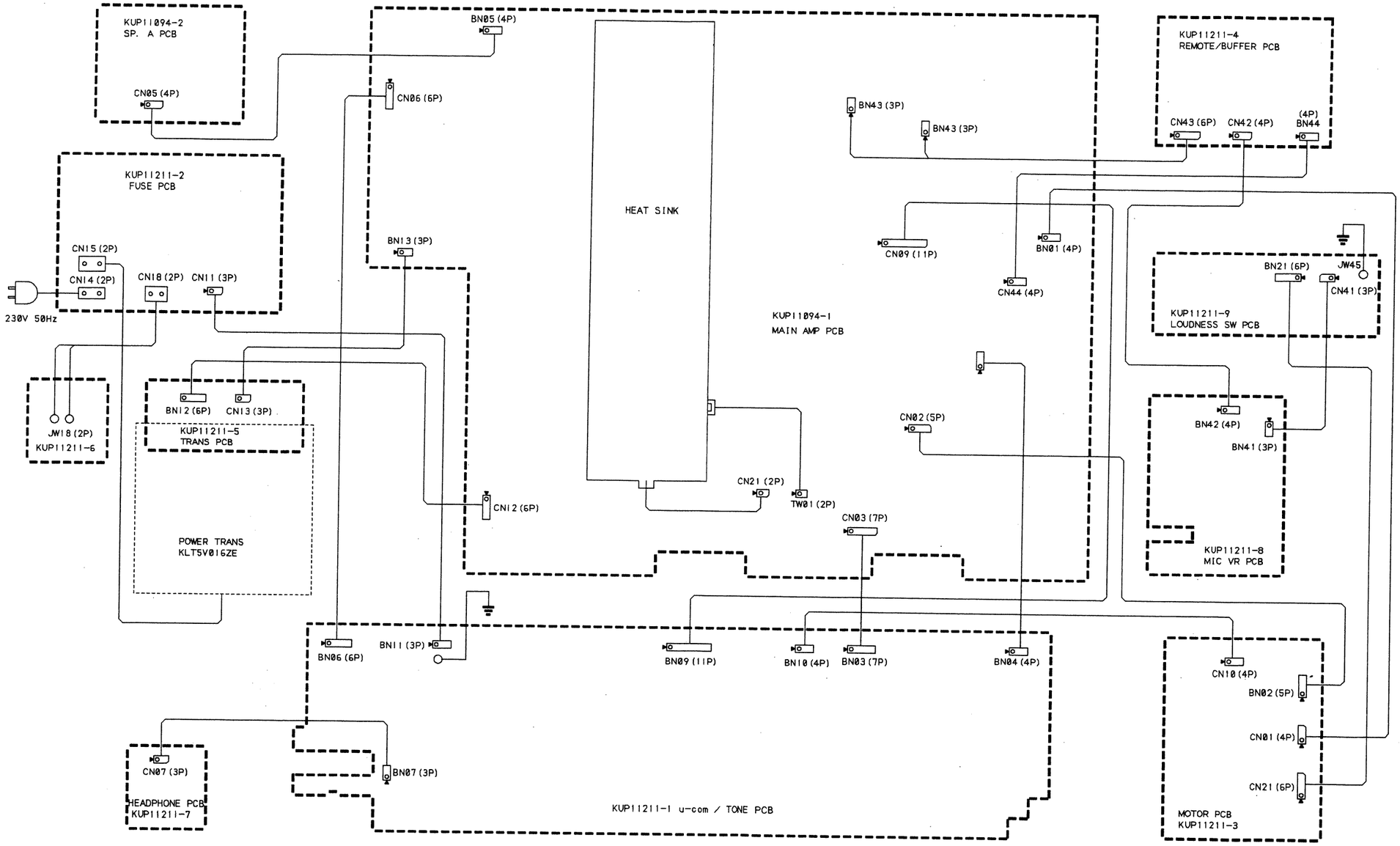
CONTROLS SETTING : TONE(BASS & TREBLE), BALANCE: MID POSITION
VOLUME: MINIMUN POSITION
LOUDNESS, SOURCE DIRECT: OFF POSITION

ADJUST	MEASURED ACROSS	VOLTMETER READING
VR51	TP02	5mV
VR52	TP01	5mV

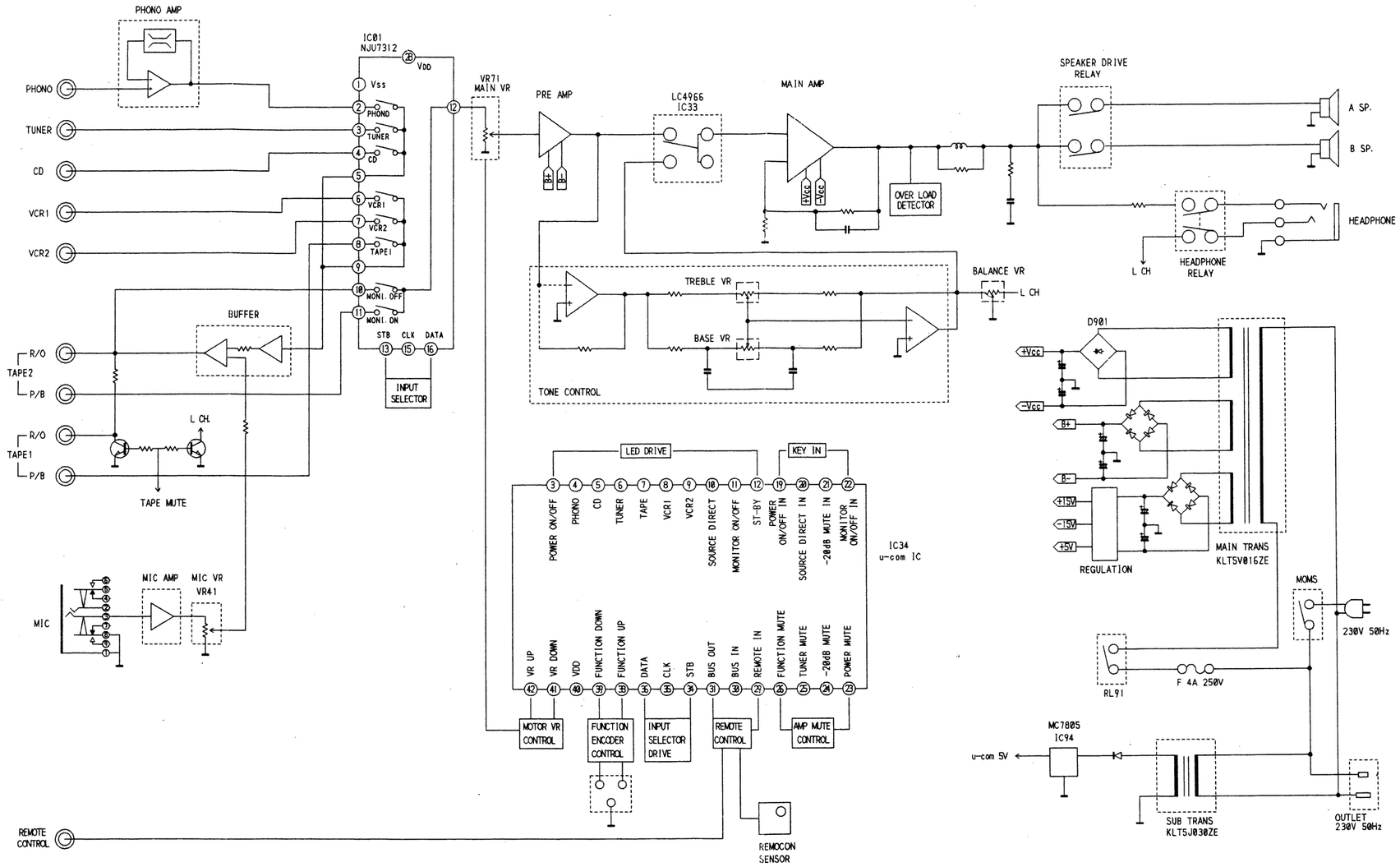
* Adjustment should be done after switch on the set for 5 minutes.



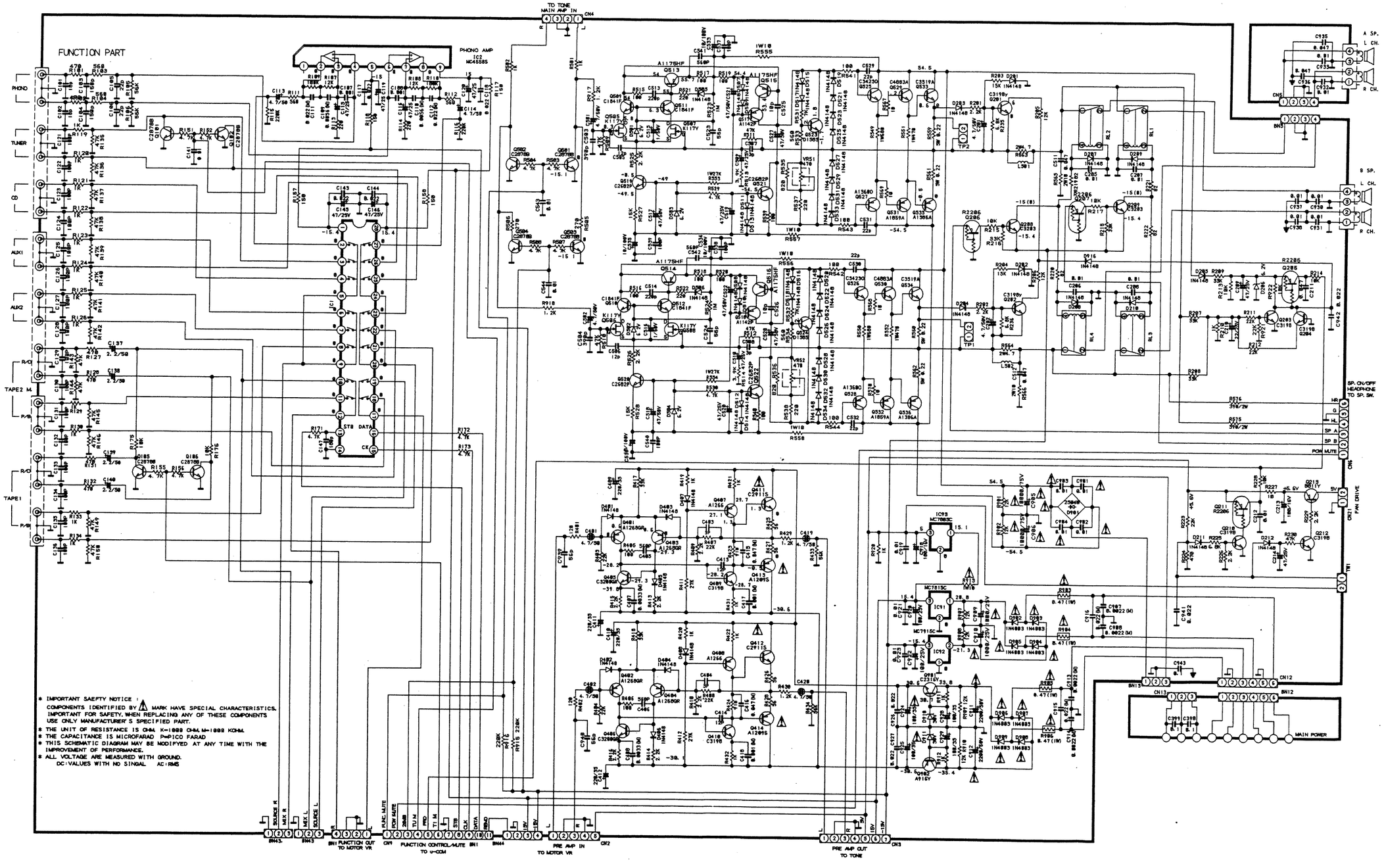
WIRING DIAGRAM

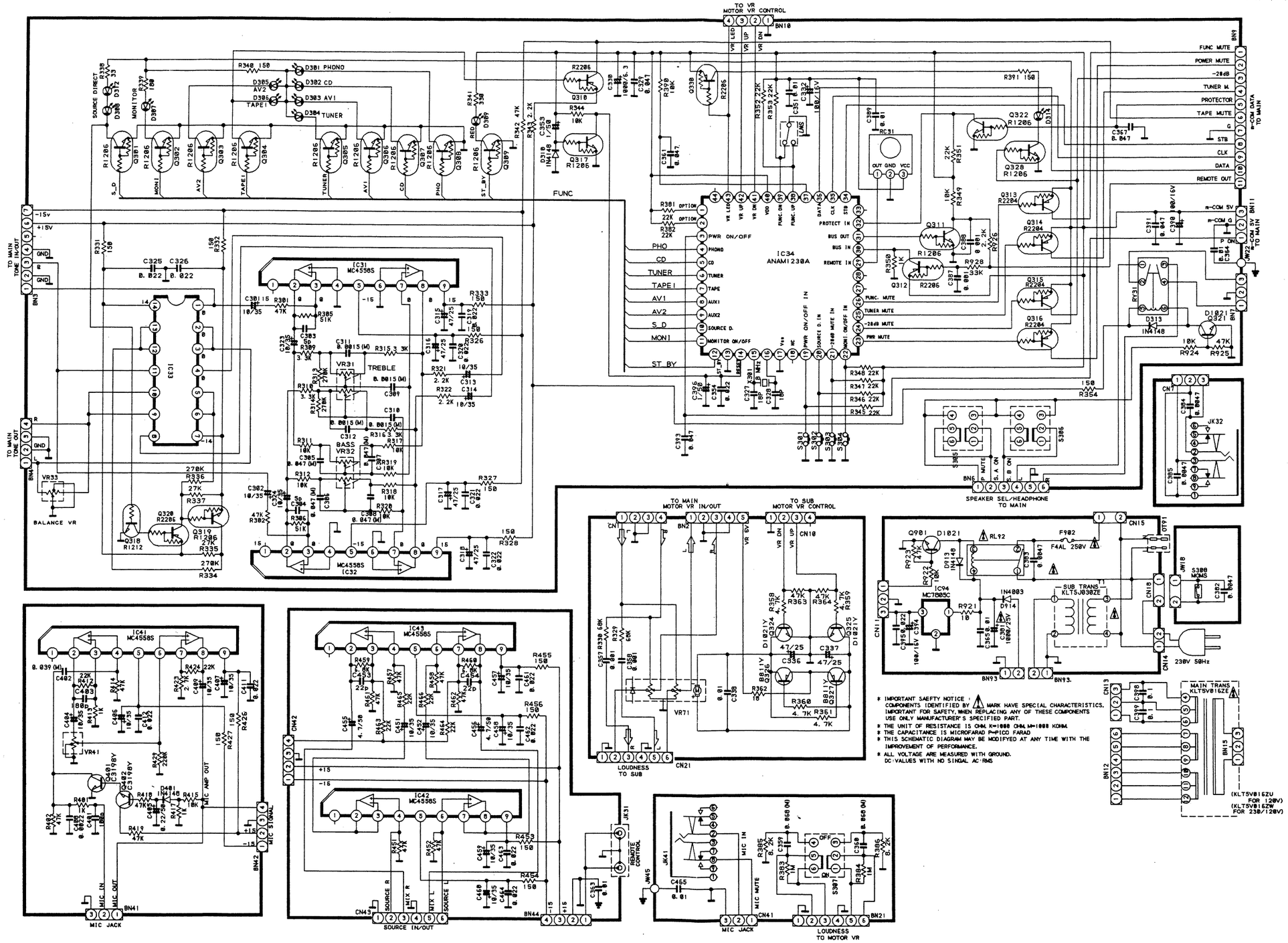


BLOCK DIAGRAM

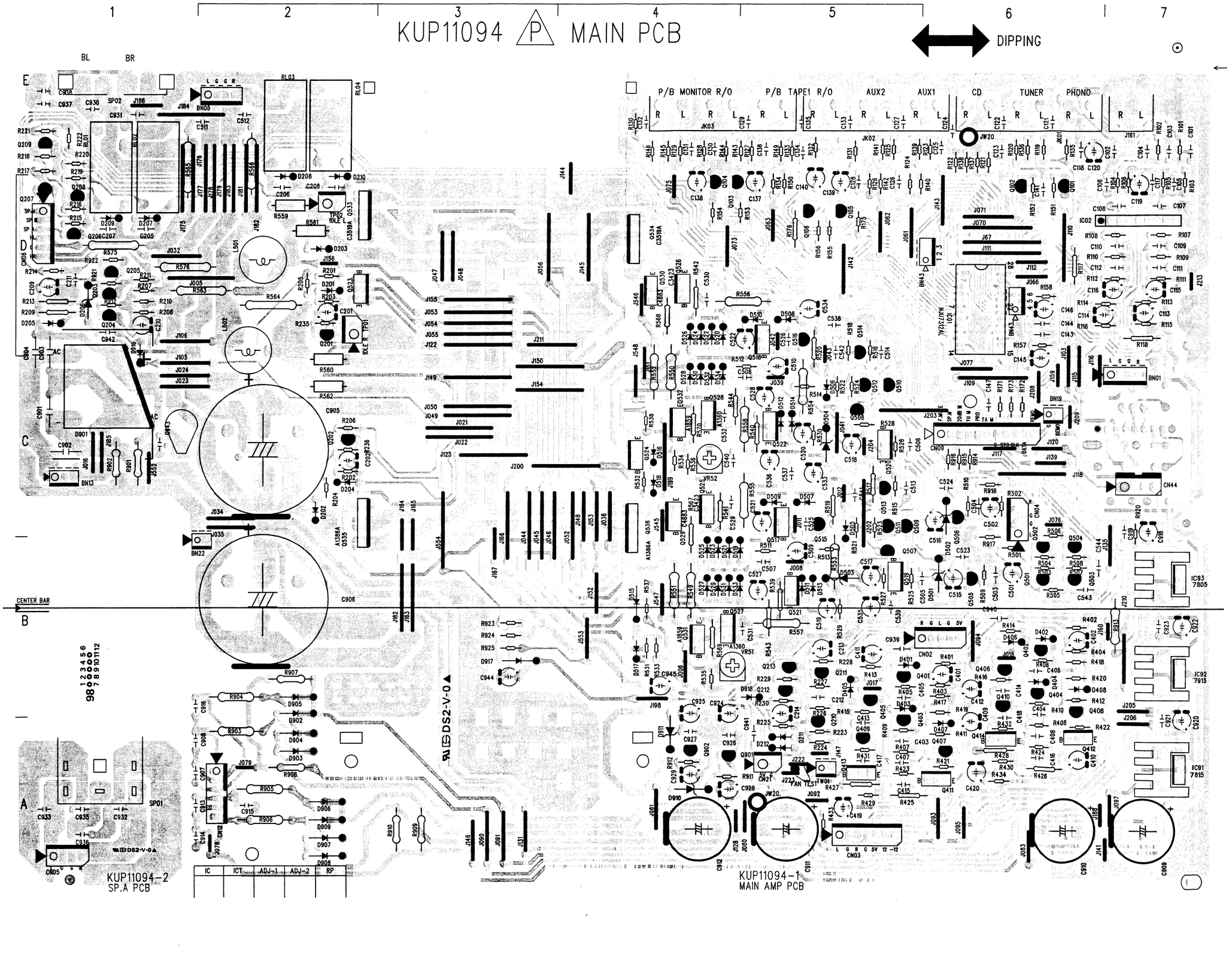


SCHEMATIC DIAGRAM




TO VR MOTOR VR CONTROL
BN10
VR LED
VR UP
VR DN
FUNC MUTE
POWER MUTE
-20dB
TUNER M.
PROTECTOR
TAPE MUTE
G
STB
CLK
DATA
REMOTE OUT
m-COM DATA TO MAIN
BN9
SOURCE DIRECT
MONITOR
D381 PHONO
D382 CD
D383 AV1
D384 TUNER
D385 AV2
D386 TAPE1
D387 PHO
D388 CD
D389 AV1
D390 AV2
D391 TAPE1
D392 TUNER
D393 AV1
D394 CD
D395 PHO
D396 S_D
D397 ST_BY
FUNC
IC34
ANAM1238A
PHO
CD
TUNER
TAPE1
AV1
AV2
S_D
MONI
ST_BY
PWR ON/OFF
PHONO
TUNER
TAPE
AUX1
AUX2
SOURCE D.
MONITOR ON/OFF
PROTECT IN
BUS OUT
BUS IN
REMOTE IN
FUNC. MUTE
TUNER MUTE
-20dB MUTE
PWR MUTE
-15v
+15v
GND
TO MAIN TONE IN/OUT
BN3
BN4
IC33
IC31 MC4558S
IC32 MC4558S
TREBLE
BASS
VR31
VR32
VR33
BALANCE VR
TO MAIN MOTOR VR IN/OUT
TO SUB MOTOR VR CONTROL
BN2
CN1
CN10
SPEAKER SEL/HEADPHONE TO MAIN
BN6
S.A ON
S.B ON
P. MUTE
JK32
CN7
m-COM 5V
m-COM G
P ON
JW22
JW11
TO MAIN
D1021
D313
IN4148
RL92
F902
F4AL 250V
S300
MOMS
SUB TRANS
KLT5J030ZE
MAIN TRANS
KLT5V816ZE
IC94
MC7805C
IN4003
D914
CN11
CN12
CN13
CN14
CN15
CN16
BN11
BN12
BN13
BN15
230V 50Hz
(KLT5V816ZU FOR 120V)
(KLT5V816ZW FOR 230/120V)
IC41 MC4558S
IC42 MC4558S
IC43 MC4558S
MIC AMP OUT
MIC SIGNAL
MIC IN
MIC OUT
MIC JACK
BN41
BN42
SOURCE IN/OUT
CN42
CN43
BN44
JK31
REMOTE CONTROL
LOUDNESS TO SUB
CN21
JK41
MIC MUTE
LOUDNESS TO MOTOR VR
BN21
CN41
* IMPORTANT SAEFTY NOTICE : COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PART.
* THE UNIT OF RESISTANCE IS OHM. K=1000 OHM, M=1000 KOHM.
* THE CAPACITANCE IS MICROFARAD P=PICO FARAD
* THIS SCHEMATIC DIAGRAM MAY BE MODIFYED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE.
* ALL VOLTAGE ARE MEASURED WITH GROUND. DC:VALUES WITH NO SINGAL AC:RMS

PRINTED CIRCUIT BOARDS



KUP11211 SUB PCB

DIPPING

KUP11211-7 HEADPHONE PCB

KUP11211-8 MIC AMP PCB

KUP11211-9 LOUDNESS PCB

KUP11211-4 REMOTE/MIC MIXING PCB

KUP11211-6 POWER SW PCB

KUP11211-10 VOL.SEL PCB

KUP11211-5 TRANS PCB

KUP11211-3 MOTOR PCB

FUSE PCB KUP11211-2

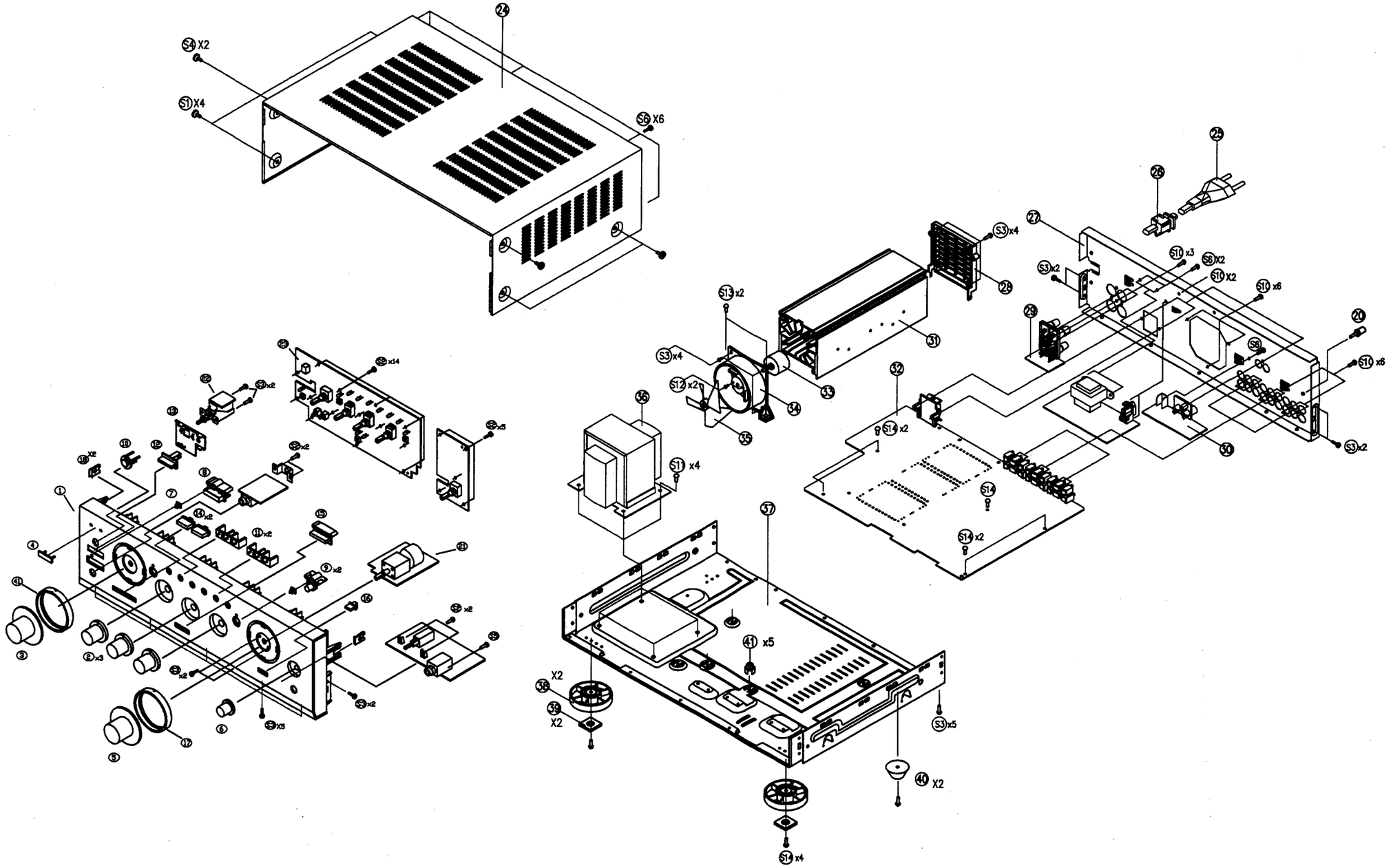
KUP11211-1 u-com/TONE CONTROL PCB

■ OPTION ● : INSERT

	EUR	UL	ASIA
J542	●		
J543			●
J567	●	●	
J538			●
J539			
J540			
J541			●
CN16			
CN17			
SW01			●
JW16			
JW17			
F001	●	●	
F002	●	●	

IC	ICT	ADJ-1	ADJ-2	RP

EXPLODED VIEW



EXPLODED VIEW

REF. NO.	PARTS NO.		REMARKS
1	9A07307100	PANEL , FRONT	KGW1A245ZH10
2	9A07306100	KNOB , ROTARY	KBN2A052Z
3	9A07307400	VOLUME CAP ASS'Y(A)	KGX1A216YA
4	9A07047400	BADGE	KGB1A056H12
5	9A07307300	VOLUME CAP ASS'Y(A)	KGX1A216WA
6	9A07305900	KNOB , ROTARY	KBN2A052Z
7	9A05887000	INDICATOR,FUNCTION	KGL1A109
8	9A07306300	KNOB , POWER	KBT1A604
9	9A07306200	KNOB , TACT	KBT1A603
10	9A07306900	ORNAMENT , REMOTE	KGR1A154
11	9A07306800	INDICATOR , FUNCTION	KGL1A162
12	9A06783600	KNOB,POWER (PUSH)	KBC1A095
13	9A07067800	BRACKET,POWER	KMD1A363
14	9A07305700	KNOB , SPEAKER	KBC1A114
15	9A07306400	KNOB , DIRECT	KBT1A605
16	9A07305800	KNOB , LOUDNESS(PUSH)	KBC1A115
17	9A06228600	HOUSING , VOLUME	KGX1A219C12
18	9A03741300	U-NUT	KNE4060
19	9A05963300	BRACKET,VOLUME	KMK1A019
20	9A05917200	GROUND TERMINAL	KMA2A001
21		VOLUME PCB	
22		POWER PVB(MOMS)	
23		SUB PCB ASS'Y	
24	9A07308300	CABINET , TOP	KKC1B085S1
25 ⚠	9A07305000	CORD , POWER	BJA2B033Z
26 ⚠	9A06783800	BUSHING,AC POWER CORD	KHR1A030
27	9A07308400	PANEL , REAR	KKF4A146XK1
28	9A06679300	H/S COVER	KGP1A015
29		SPEAKER PCB	
30		REMOTE PCB	
31	9A07308800	HEAT SIMK	KMY1A122
32		MAIN PCB	
33	9A06679000	MOTOR	BDMMDN4RB4MRC
34	9A06678900	FRAME FAN	KGP1A016
35	9A06678800	FAN	KDD1A013
36	9A07308600	TRANS , POWER	KLT5V016ZE
37	9A07310200	CHASSIS , BOTTOM	KUA4A148
38	9A05891400	FOOT,FRONT	KKL1A042H11
39	9A06754800	RUBBER,CUSHION	KHG1A050
40	9A06755300	FOOT,RUBBER (BLACK)	KKL1A012
41	9A01375500	PCB HOLDER	KHE170
42	9A07307700	HOUSING , VOLUME	KGX2A219C12
S1	9A05338800	SCREW KTB4+6F	KTB4+6F
S2	9A01377400	SCREW,KTB3+10G	KTB3+10G
S3	9A01535800	SCREW,KTB3+8J	KTB3+8J
S4	9A01477900	SCREW,KTB4*12JFZ	KTB4+12JFZ
S5	9A01377600	SCREW,KTWS3+10G	KTWS3+10G
S6	9A01377200	SCREW KTB3+8JFZ	KTB3+8JFZ
S10	9A01377300	SCREW,KTB3+10GFZ	KTB3+10GFZ
S11	9A01477800	SCREW,KTB4*8F	KTB4+8F
S12	9A06699900	SCREW	KSN2+4
S13	9A06679700	SCREW ,KTB3+14J	KTB3+14J
S14	9A01535800	SCREW,KTB3+8J	KTB3+8J
S15	9A05339100	SCREW KTW3+12J	KTW3+12J
⚠	9A058949-00	FUSE, F4A	KBA2C4000NRE

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A07125100	OWNER'S MANUAL, E/F/G/I/S A-R600	KQX1A484Z
	9A07305600	REMOCON XMTR ASSY(UR-592)	KARTAR600

■ PARTS LIST

ATTENTION

1. When placing an order for parts, be sure to list the Part No., Model No, and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.
2. Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.
3. Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, plaese use this Parts List for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
3. How to rear the Parts List.

■ RESISTORS AND CAPACITORS

Notes :
- Part numbers are indicated for most mechanical parts. Please use this part number for parts order.
- IMPORTANT SAFETY NOTICE. Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacture's specified parts.
- The unit of resistance is OHM(Ω) K=1000(Ω), M=1000(KΩ)
- The unit of capacitance is MICROFARED(μF) P=10 $^{-6}$μF

■ Numbering System of Resistor

Example

KRD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
KRD: Carbon KRG: Metal Oxide	20:1/5W 25:1/4W 50:1/2W 1:1W	F:= ±1% J:= ±5% K:= ±10%
KRF:Metal Cement	2:2W 3:3W	

■ Numbering System of Capacitor

Example

KCKR	1H	101	K	B
Type	Voltage	Value	Tolerance	Peculiarity

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
KCB:Ceramic	0J:6.3V	1H:50V DC	C: ±0.25pF
KCC:Ceramic	1A:10V	1:125V DC	G: ±2%
KCK:Ceramic	1C:16V	KC:400V AC	J: ±5%
KCQI:Polyester	1E:25V		K: ±10%
KCQP:Polypropylene	1H:50V		Z: +80%, -20%
KCQS:Polystyrol	1V:35V		

WARNING

⚠(*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠(*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

MAIN PCB ASS'Y

REF. NO.		PARTS NO.	DESCRIPTION	REMARKS
		9A07309000	MAIN PCB ASS'Y	KOP11094D
		9A07310300	MAIN , PCB	KUP11094P
		9A06678800	FAN	KDD1A013
		9A06679000	MOTOR	BDMMDN4RB4MRC
C905.906	⚠	9A06167100	CAP,ELECT TDL75V103N	KCETDL75V103N
C909.910	⚠	9A06226700	CE, 1000UF H 25V DC	KCEA1EH102E
C911.912	⚠	9A07306600	CAP , ELECT	KCEA1HH222E
D201-205		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D206	⚠	9A05902300	DIODE,ZENER,6.2Z	KVDUZ6.2BMT
D207-212		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D401-408		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D501-506	⚠	9A05902300	DIODE,ZENER,6.2Z	KVDUZ6.2BMT
D505-514		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D515		9A01390600	DIODE,1N4148T	KVD1N4148T
D516-534		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D901	⚠	9A05987900	DIODE,BRIDGE,BPC2504WF	BVDKBPC2504WF
D902-909	⚠	9A05194700	DIODE,1N4003ST	KVD1N4003ST
D910.911	⚠	9A05902200	DIODE,ZENER,30V	KVDUZ30BMT
D916		9A01390500	DIODE,1N4148MT	KVD1N4148MT
IC01		9A06674500	IC NJU7312L	BVINJU7312L
IC02		9A05195800	IC,MC4558S	KVIMC4558S
IC91	⚠	9A05895100	IC MC7815C	KVIMC7815C
IC92	⚠	9A05895200	IC MC7915C	KVIMC7915C
IC93	⚠	9A05341500	IC, KA7805-ABTU	KVIMC7805C
JK01-03		9A06761800	TERMINAL,IN/OUT	KJJ4R012Z
L501.502		9A05895800	COIL,SPEAKER	KLR9Y003Z
Q101.102		9A05896000	TR,KTC2878B	KVTKTC2878BT
Q105.106		9A05896000	TR,KTC2878B	KVTKTC2878BT
Q201-204		9A05892800	TR,KTC3198YT	KVTKTC3198YT
Q205-207		9A03745200	TR,KSR2206TA	KVTKSR2206T
Q208.209		9A05197400	TR,KTC3203YT	KVTKTC3203YT
Q210		9A05892800	TR,KTC3198YT	KVTKTC3198YT
Q211		9A03745200	TR,KSR2206TA	KVTKSR2206T
Q212		9A05892800	TR,KTC3198YT	KVTKTC3198YT
Q213		9A03747300	TR,KSB811-YTA	KVTKSB811YT
Q401-404		9A06236600	TR,KTA1268GRT	KVTKTA1268GRT
Q405.406		9A06236700	TR,KTC3200GRT	KVTKTC3200GRT
Q407.408		9A05895900	TR,KTA1266YT	KVTKTA1266YT
Q409.410		9A05892800	TR,KTC3198YT	KVTKTC3198YT
Q411.412		9A06225500	T.R 2SC2911S	BVT2SC2911S
Q501-503		9A05896000	TR,KTC2878B	KVTKTC2878BT
Q505-508		9A06236800	F.E.T KTK117Y	KVTKTK117YT
Q509-512		9A05976900	TR.,2SC1841	BVT2SC1841F
Q513-516		9A05977000	TR.,2SA1175	BVT2SA1175HF
Q517.518		9A05977900	TR.,2SA1142	BVT2SA1142P
Q519-522		9A05977100	TR.,2SC2682	BVT2SC2682P
Q523.524		9A05977200	TR.,2SD1585	BVT2SD1585L
Q525.526		9A07305300	T.R 2SC3423O	BVT2SC3423O
Q527.528		9A07305200	T.R 2SA1360O	BVT2SA1360O
Q529.530		9A05977600	TR.,2SC4883A	BVT2SC4883A
Q531.532		9A05977500	TR.,2SA1859A	BVT2SA1859A
Q533.534		9A05987800	TR., 2SC3519A	BVT2SC3519A
Q535.536		9A05977700	TR.,2SA1386A	BVT2SA1386A
Q901		9A05196800	TR,KSC2316-Y-SHTA	KVTKSC2316YT
Q902		9A05196700	TR,KSA916-Y-SHTA	KVTKSA916YT
R549.550	⚠	9A07309800	RES , METAL OXIDE FILM	KRG1ANJ681H
R551.552	⚠	9A07309700	RES , METAL OXIDE FILM	KRG1ANJ471H
R553.554	⚠	9A05978400	R.,27K-OHM,1W	KRG1ANJ273H
R555-558	⚠	9A05338000	R,METAL OXIDE FILM 1W 10	KRG1ANJ100H
R559-562	⚠	9A05896300	R.,0.22-OHM,5W	KRF5EKR22H
R563.564	⚠	9A05979000	R.,4.7-OHM,2W	KRG2ANJ4R7H
R565.566	⚠	9A05978900	R.,10-OHM,2W	KRG2ANJ100H
R567-570	⚠	9A05978700	R.,10-OHM	KRD25FJ100T
R575.576	⚠	9A05896500	R.,390-OHM,2W	KRG2ANJ391H
R901.902	⚠	9A05896900	R,CARBON 1/2W 12K	KRD50FJ123T
R903-906	⚠	9A06760900	R,FUSE 0.47 J 1W	KRQ1AJR47H
R907-910	⚠	9A05896900	R,CARBON 1/2W 12K	KRD50FJ123T
R913	⚠	9A07309900	RES , FUSE	KRQ1AJ100H
RL01-04		9A05987100	RELAY HR-CR7-DC12V	KSL1A007ZE
SP01		9A06677000	TERMINAL SP	KJJ5P011Z
SP02		9A07308000	TERMINAL , SPEAKER	KJJ5P014Z
TW01		9A06675400	THERMISTER	KRTNTC5D103
VR51.52		9A07305100	RES , SEMI FIXED	BVNCA471B01G

SUB PCB ASS'Y

REF. NO.		PARTS NO.	DESCRIPTION	REMARKS
		9A07309100	SUB PCB ASS'Y	KOP11211B
		9A06758000	JACK,HEAD PHONE	BJJ2E020Z
		9A07310400	SUB , PCB	KUP11211Z
C381	⚠	9A06226700	CE, 1000UF H 25V DC	KCEA1EH102E
D301-307		9A05890300	LED,YELLOW SLR342YCF02	KVD342YCF02T085
D308		9A07310600	L.E.D , GREEN SLR325MCA47	KVDSLR325MCA47
D309		9A05195000	LED,RED SLR342VCF02	KVD342VCF02T085
D310		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D312		9A07310600	L.E.D , GREEN SLR325MCA47	KVDSLR325MCA47
D313		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D314		9A05890300	LED,YELLOW SLR342YCF02	KVD342YCF02T085
D401.913		9A01390500	DIODE,1N4148MT	KVD1N4148MT
D914	⚠	9A05194600	DIODE,1N4003SRT	KVD1N4003SRT
F902		9A05328200	HOLDER,FUSE KJCFC5S	KJCFC5S
IC31.32		9A05195800	IC,MC4558S	KVIMC4558S
IC33		9A05971200	IC,,LC4966	BVILC4966
IC34		9A07044400	I.C , O.T.P	BVITMP87PH47U
IC41.42		9A05195800	IC,MC4558S	KVIMC4558S
IC43		9A05195800	IC,MC4558S	KVIMC4558S
IC94		9A05341500	IC, KA7805-ABTU	KVIMC7805C
JK31		9A05916800	JACK, BOARD	KJJ4N010Z
OT91	⚠	9A06861900	OUTLET , AC (1P)	BJJ7A006Z
Q301-309		9A05196900	TR,KSR1206TA	KVTKSR1206T
Q310-312		9A03745200	TR,KSR2206TA	KVTKSR2206T
Q313-317		9A05198800	TR,KSR2204TA	KVTKSR2204T
Q318		9A07310800	T.R KSR1212T	KVTKSR1212T
Q319		9A05196900	TR,KSR1206TA	KVTKSR1206T
Q320		9A03745200	TR,KSR2206TA	KVTKSR2206T
Q321		9A03811700	TR,KSD1021-YTA	KVTKSD1021YT
Q322		9A05196900	TR,KSR1206TA	KVTKSR1206T
Q324.325		9A03811700	TR,KSD1021-YTA	KVTKSD1021YT
Q326.327		9A03747300	TR,KSB811-YTA	KVTKSB811YT
Q328		9A05196900	TR,KSR1206TA	KVTKSR1206T
Q330		9A03745200	TR,KSR2206TA	KVTKSR2206T
Q401.402		9A05892800	TR,KTC3198YT	KVTKTC3198YT
Q901		9A03811700	TR,KSD1021-YTA	KVTKSD1021YT
RC31		9A06757900	IC,PNA4612M00HB	BRVPNA4612M00HB
RL31		9A06224600	RELAY G5Z-2A-DC12V	BSL4A008ZE
RL92	⚠	9A05987100	RELAY HR-CR7-DC12V	KSL1A007ZE
S301-304		9A06671200	SW.TACT EVQ21505R	BST1A014ZT
S305.306		9A05385600	SW,PUSH(VERTICAL)	KSH2B003Z
S307		9A07310000	SW , PUSH	KSH2B017Z
S308	⚠	9A06784700	SW, PUSH (MOMS)	KSH1A001ZV
SW71		9A06224700	VR , ENCODOR EC16B1210	BSR2A006Z
T001	⚠	9A07308500	TRANS , SUB	KLT5J030ZE
VR31.32		9A07044500	RES , VR	BVV2X04B503Z
VR33		9A06758500	RES,VARIABLE	BVV1U01W104Y
VR41		9A07305400	RES , VARIABLE	BVV1U01B503Y
VR71		9A07305500	RES , MOTOR	BVV9Y08B104Z
X301		9A05193000	CRYSTAL, 08000E160C	KOX08000E160C

TEAC

TEAC CORPORATION	3-7-3, Nakacho, Musashino-shi, Tokyo 180-8550, Japan Phone: (0422) 52-5081
TEAC AMERICA, INC.	7733 Telegraph Road, Montebello, California 90640 Phone: (213) 726-0303
TEAC CANADA LTD.	5939 Wallace Street, Mississauga, Ontario L4Z 1Z8, Canada Phone: 905-890-8008
TEAC MEXICO, S.A. De C.V	Privada De Corina, No.18, Colonia Del Carrmen Coyoacon, Mexico DF 04100 Phone: 5-658-1943
TEAC UK LIMITED	5 Marlin House, Marlins Meadow, The Croxley Centre, Watford, Herts. WD1 8YA, U.K. Phone: 01923-819699
TEAC DEUTSCHLAND GmbH	Bahnstrasse 12, 65205 Wiesbaden-Erbenheim, Germany Phone: 0611-71580
TEAC FRANCE S. A.	17 Rue Alexis-de-Tocqueville, CE 005 92182 Antony Cedex, France Phone: 01.42.37.01.02
TEAC BELGIUM NV/SA	P.A. TEAC Nederland BV, Perkinsbaan 11a, 3439 ND Nieuwegein, Netherlands Phone: 0031-30-6048115
TEAC NEDERLAND BV	Perkinsbaan 11a, 3439 ND Nieuwegein, Netherlands Phone: 030-6030229
TEAC AUSTRALIA PTY., LTD. A.C.N. 005 408 462	106 Bay Street, Port Melbourne, Victoria 3207, Australia Phone: (03) 9644-2442
TEAC ITALIANA S.p.A.	Via C. Cantù 11, 20092 Cinisello Balsamo, Milano, Italy Phone: 02-66010500

KQR1A002Z

PRINTED IN KOREA